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50X1-HUM

Electrical Data

The main data on receiving characteristics of the attachment are as follows:

1. Sensitivity at an output level of 50 mv for all settings -- not less than 250 microvolts.
2. Selectivity when detuned -- 10 kc for all three stations -- not less than 26 db.
3. Attenuation of image effect -- not less than 60 db.
4. Frequency pass band during attenuation to half signal strength -- 7-10 kc.
5. The ARCH action ensures stability of output within 10 db during changes of incoming signal voltage by 100 times.
6. The harmonic factor at an output of 200 mv is less than one percent.
7. The intermediate frequency of the receiver is 468 kc.

It is obvious from this data that the reception properties of this attachment correspond to those of a second-class superheterodyne. Its outstanding feature is the wide pass band which is very important in local station reception. Furthermore, it has low nonlinear and frequency distortion.

Total current consumption for the heater circuit amounts to 1.15 amp, and for the plate circuit, 14 ma at 250.

Operating conditions for the tubes are as follows: plate voltage for the 6A8 and 6K7, -- 250 v; oscillator plate voltage of the 6A8, -- 180 v; screen grids of the 6A8 and 6K7, -- 90 v; and control grid voltage on the 6A8 and 6K7 (bias voltage) 3 v.

Data on Parts

All the parts of the attachment, except the coils, are standard. All the receiver coils are of the universal type, wound on carbolite frames, 8 mm in diameter. With the aid of the magnetic cores of the coils of the input and oscillator circuits, it is possible to change the tuning of the attachment in the ranges 200-290 m, 390-600 m, and 1,350-2,000 m. It must be borne in mind that the sensitivity of the receiver will be decreased at the extremities of these settings. Therefore, in changing over to these waves, it is advisable to make appropriate changes in the number of turns on the input and oscillator coils.

The attachment is being used on an increasing scale because of its simplicity, reliability, and excellent reception.

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- 2 -

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